

MIKIHIRO *et al.*, SN 09/937,842
Amdt. dated 03/30/2005
Reply to OA mailed 12/30/2004

Dkt. 983.40662X00/PO-65US-0803
Page 2

IN THE CLAIMS:

1. (Currently Amended) A biological optical measurement instrument ~~comprising which is provided with~~
a measurement probe which irradiates light beams having a plurality of wavelengths ~~and introduced from a light beam source through optical fibers onto a subject, and collects the light beams passed inside the subject from a plurality of positions, and produces from the collected passed-light beams a living-body-passed light beam intensity picture image of the subject, characterized in that wherein the measurement probe is provided with an optical fiber fixing member which fixes the optical fibers in a predetermined interval and a support member which supports the optical fiber fixing member, and the measurement probe is held in such a manner to permit rocking of the subject integral with the support member~~ the optical fiber fixing member is a hollow cylinder having an access cut out portion extending along at least a partial longitudinal length thereof.

2. (Canceled)

3. (Currently Amended) A biological optical measurement instrument according to claim 1, ~~characterized in that~~ comprising the biological optical measurement instrument ~~further~~ provided with a sense stimulating means having an acoustic means which outputs a predetermined acoustic wave and/or a video means which displays a predetermined video image, and a picture image production means

MIKIHIRO *et al.*, SN 09/937,842
Amdt. dated 03/30/2005
Reply to OA mailed 12/30/2004

Dkt. 983.40662X00/PO-65US-0803
Page 3

which produces a ~~living body~~ passed-light beam intensity picture image of the subject relating to the stimulating output from the sense stimulation means.

4. (Currently Amended) A biological optical measurement instrument ~~comprising: which makes use of~~
a measurement probe which irradiates light beams having a plurality of wavelengths at a plurality of positions of a subject via an optical fiber while contacting the optical fiber onto the skin surface thereof, and collects light beams passed inside the subject from a plurality of other positions of the subject via another optical fiber while contacting the other optical fiber onto the skin surface thereof, and produces a ~~living body~~ passed-light beam intensity picture image of the subject based on the light beam passed inside the subject and collected, ~~characterized in that~~where the measurement probe is constituted by a shell plate which includes probe holder attachment holes provided so as to correspond to a predetermined optical fiber arrangement pattern, probe holders which are attached to the respective probe holder attachment holes in the shell plate and probe casings which catch the top end portions of the respective optical fibers and are fitted into the respective probe holders, and wherein the optical fiber fixing member is a hollow cylinder having an access cut out portion extending along at least a partial longitudinal length thereof. ~~as well as the measurement probe is constituted so as to hold rockably the subject at the opposite face thereof from the face where the probe casings are fitted in order to prevent displacement of contact positions between the optical fibers and the subject due to movement of the subject.~~

MIKIHIRO *et al.*, SN 09/937,842
Amdt. dated 03/30/2005
Reply to OA mailed 12/30/2004

Dkt. 983.40662X00/PO-65US-0803
Page 4

5. (Currently Amended) A biological optical measurement instrument according to claim 4, ~~characterized in that~~wherein the measurement probe is also constituted ~~so as to~~ permit movement in horizontal direction.

6. (Currently Amended) A biological optical measurement instrument according to claim 4, ~~characterized in that~~comprising the measurement probe is supported by a pair of stationary support pillars via belts attached to both ends of the measurement probe.

7. (Currently Amended) A biological optical measurement instrument according to claim 4, ~~characterized in that the~~where a side of the measurement probe where the probe casings are fitted into the probe holders is covered by a casing.

8. (Currently Amended) A biological optical measurement instrument according to claim 4, ~~characterized in that~~wherein each of the probe holders of the measurement probe is an incomplete cylindrical shape formed by cutting out a longitudinal part thereof.

9. (Currently Amended) A biological optical measurement instrument according to claim 8, ~~characterized in that~~comprising the shell plate of the measurement probe is provided with a hole which is used for displacing a ~~possible~~ hair coming between one of the optical fibers and the skin surface of the subject at

MIKIHIRO *et al.*, SN 09/937,842
Amdt. dated 03/30/2005
Reply to OA mailed 12/30/2004

Dkt. 983.40662X00/PO-65US-0803
Page 5

the outside of each of the probe holder attachment holes and at the side of the cut out portion of each of the probe holders.

10. (Currently Amended) A biological optical measurement instrument according to claim 4, ~~characterized in that~~comprising the measurement probe is further provided with a compressed air injection means ~~which causes~~useable to displace a hair ~~possibly~~ coming between one of the optical fibers and the skin surface of the subject.

11. (Currently Amended) A biological optical measurement instrument according to claim 4, ~~characterized in that~~comprising each of the probe casings is provided with a pressure sensor which monitors a contacting pressure of the optical fiber ~~caught thereby~~ onto the skin surface of the subject.

12. (Currently Amended) A biological optical measurement instrument according to claim 4, ~~characterized in that~~comprising each of the probe casings is provided with a shutter which shields the light beams from the optical fibers, ~~caught thereby~~.

13. (Currently Amended) A biological optical measurement instrument according to claim 4, ~~characterized in that~~comprising a spring mechanism is provided between each of the probe holders and the probe casings of the

MIKIHIRO *et al.*, SN 09/937,842
Amdt. dated 03/30/2005
Reply to OA mailed 12/30/2004

Dkt. 983.40662X00/PO-65US-0803
Page 6

measurement probe, and functions to press the optical fiber caught by the probe
easing onto the skin surface of the subject.

14.-16. (Canceled)

17. (New) A biological optical measurement instrument according to claim 1,
wherein the measurement probe is held in such a manner to permit rocking of the
subject integral with the support member.

18. (New) A biological optical measurement instrument according to claim 4,
wherein the measurement probe is rockable at an opposite face thereof from a face
where the probe casings are fitted, in order to prevent displacement of contact
positions between the optical fibers and the subject due to movement of the subject.

19. (New) A biological optical measurement instrument according to claim 1,
comprising a probe casing which catches a top end portion of an optical fiber and is
fitted into the optical fiber fixing member.

20. (New) A biological optical measurement instrument according to claim 19,
wherein along an inner circumference of each of the optical fiber fixing member, a
fixing groove having a predetermined width is formed.

MIKIHIRO *et al.*, SN 09/937,842
Amdt. dated 03/30/2005
Reply to OA mailed 12/30/2004

Dkt. 983.40662X00/PO-65US-0803
Page 7

21. (New) A biological optical measurement instrument according to claim 20, wherein the probe casing is provided with a stopper claw near a top end portion thereof so as to permit engagement with the fixing groove.

22. (New) A biological optical measurement instrument according to claim 21, wherein a shape of a part projecting from the optical fiber fixing member is defined in such a manner that a projection amount thereof gradually increases in a direction from a top end to bottom end.

23. (New) A biological optical measurement instrument according to claim 19, wherein the optical fiber fixing member is provided with a stopper claw so as to properly position the probe casing.

24. (New) A biological optical measurement instrument according to claim 4, comprising a fixing groove having a predetermined width formed along an inner circumference of each of the probe holders.

25. (New) A biological optical measurement instrument according to claim 24, wherein each of the probe casings is provided with a stopper claw near a top end portion thereof so as to permit engagement with the fixing groove.

26. (New) A biological optical measurement instrument according to claim 25, wherein a shape of a part projecting from the probe holder is defined in such a

MIKIHIRO *et al.*, SN 09/937,842
Amdt. dated 03/30/2005
Reply to OA mailed 12/30/2004

Dkt. 983.40662X00/PO-65US-0803
Page 8

manner that the projection amount thereof gradually increases in a direction from a top end to bottom end.

27. (New) A biological optical measurement instrument according to claim 4, wherein each of the probe holders is provided with a stopper claw so as to properly position each of the probe casings.

28. (New) A biological optical measurement instrument according to claim 1, comprising a hair avoiding jig which is applied through the cut out portion of the optical fiber fixing member, wherein the hair avoiding jig is constituted by a holder portion and a guide extending from the holder portion, and the guide is bent near the top end thereof and is permitted to emit light therefrom.

29. (New) A biological optical measurement instrument according to claim 4, comprising a hair avoiding jig which is applied through the cut out portion of the probe holder, wherein the hair avoiding jig is constituted by a holder portion and a guide extending from the holder portion, and the guide is bent near the top end thereof and is permitted to emit light therefrom.

30. (New) A biological optical measurement instrument comprising:
a measurement probe which irradiates light beams having a plurality of wavelengths from a light beam source through optical fibers onto a subject, and collects the light beams passed inside the subject from a plurality of positions, and

MIKIHIRO *et al.*, SN 09/937,842
Amdt. dated 03/30/2005
Reply to OA mailed 12/30/2004

Dkt. 983.40662X00/PO-65US-0803
Page 9

produces from collected light beams a light beam intensity picture image of the subject, wherein the measurement probe is provided with an optical fiber fixing member which fixes the optical fibers in a predetermined interval and a support member which supports the optical fiber fixing member, and the optical fiber fixing member is a hollow member having an access cut out portion extending along at least a partial longitudinal length thereof.